

JACOB D. HART

SENIOR SOFTWARE ENGINEER

jacobdhart@gmail.com

TEL: (405) 589-8688 | SKYPE: jacob_d_hart

STRENGTHS

- 10 years professional game development experience
- Fluent in C++ and C#. Proficient in C, JavaScript, and Python
- Daily experience with common software engineering practices and tools (Perforce, git, agile/scrum, bug tracking)

PROJECTS & WORK EXPERIENCE

Self-Employed

Software Engineer, 2016-present

- Independently developed two multiplayer 3D vehicle combat games: speedboats.io and outgun.io
- Authored a retro-style 3D shooter engine from first principles
- Designed, developed, and deployed Burger Run, an infinite runner game for Android

Batman: Arkham Underworld

Turbine, Inc.

Senior Software Engineer, 2013-2016

- Worked closely with designers to develop AI, pathfinding, and perception systems
- Authored the in-game base builder, which designers and players utilized to create level content
- Devised an intuitive, momentum-based camera controller for multi-touch devices
- Architected and implemented localization system

Mind Your Own Budget

K20 Center

Lead Developer, 2012-2013

- Authored furniture system that allowed the player to upgrade and customize their environment
- Translated design to detailed technical specifications
- Organized group code reviews and mentored junior developers

Energy and Me

K20 Center

Lead Developer, 2011-2013

- Developed and maintained world editor
- Implemented launcher and patching system, removing the need for customers to do manual reinstallations
- Established continuous integration servers for Windows and OS X, which greatly increased build reliability

Pathways to Success

K20 Center

Software Developer, 2009-2011

- Devised a system for dynamically generating 3D buildings, which formed the core of the gameplay environment
- Developed a radiosity solver to generate lightmaps that look great, even on commodity hardware

SELECTED PERSONAL PROJECTS

- *Gray Day (2016)*: A tape echo simulation inspired by the classic Echoplex and Roland Space Echo units
- *Cubephoria (2012)*: A music-controlled, beat-aware LED cube
- *PyDNA (2011)*: A program that uses genetic algorithms to mimic an arbitrary data source
- *Music Painter (2008)*: An Xbox 360 game that dynamically converts the player's drawings into music

Source code and videos are available at jake-hart.com.

EDUCATION

University of Oklahoma, Bachelor's degree in International and Area Studies